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Amendments to the Claims:

Please amend claims 5 and 10 to read as follows. All claims pending, including those unchanged by the present amendment, are reproduced below for the convenience of the Examiner. This listing of claims will replace all prior versions, and listings, of claims in the application:

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1.-4. (Canceled)

5. (Currently amended) A compound of formula III:

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wherein:

4 R⁸ is selected from the group consisting of H, -OH, C₁₋₈alkyl, C₂₋₈alkenyl, C₂₋₈alkynyl,

5 C₃₋₈cycloalkyl, C₆₋₁₂carbocyclic aryl, a five to ten membered heterocyclic ring system having 1-4

6 heteroatoms selected from the group consisting of N, O and S; and C₁₋₆alkylheterocyclic ring

7 system having in the ring system 5 to 10 atoms with 1 to 4 of such atoms being selected from the

8 group consisting of N, O and S;

9 R^1 is a member selected from the group consisting of H, C_{1-8} alkyl, C_{2-8} alkenyl,

10 C₂₋₈alkynyl, C₃₋₈cycloalkyl, halogen, polyhaloalkyl, C₀₋₈alkyl-C(=O)OH,

 $11 \quad C_{0-8}alkyl-C(=O)O-C_{1-8}alkyl, -CN, -NO_2, C_{1-8}alkyl-OH, C_{0-8}alkyl-SH, -C(=O)NR^2R^3, -O-R^2 \ and \ C_{0-8}alkyl-C(=O)O-C_{1-8}alkyl, -CN, -NO_2, C_{1-8}alkyl-OH, C_{0-8}alkyl-SH, -C(=O)NR^2R^3, -O-R^2 \ and \ C_{0-8}alkyl-C(=O)O-C_{1-8}alkyl, -CN, -NO_2, C_{1-8}alkyl-OH, C_{0-8}alkyl-SH, -C(=O)NR^2R^3, -O-R^2 \ and \ C_{0-8}alkyl-C(=O)O-C_{1-8}alkyl-C(=O)O-C_{1-8}alkyl-CN, -NO_2, C_{1-8}alkyl-OH, C_{0-8}alkyl-SH, -C(=O)NR^2R^3, -O-R^2 \ and \ C_{0-8}alkyl-CN, -C(=O)NR^2R^3$

12 -O-C(=O)R², an unsubstituted amino group, a mono- or di-substituted amino group, wherein the

substituted amino groups are independently substituted by at least one member selected from the

group consisting of H, C₁₋₈alkyl, C₂₋₈alkenyl, C₂₋₈alkynyl, C₃₋₈cycloalkyl, polyhaloalkyl, -SO₂R²,

15 C₀₋₈alkyl-C(=O)OH and C₀₋₈alkyl-C(=O)O-C₁₋₈alkyl, where R² and R³ is as described above;

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R² and R³ are independently is selected from the group consisting of H, -OH, C_{1.8}alkyl, 16 C₂₋₈alkenyl, C₂₋₈alkynyl, C₃₋₈cycloalkyl, C₆₋₁₂carbocyclic aryl, a five to ten membered 17 heterocyclic ring system having 1-4 heteroatoms selected from the group consisting of N, O and 18 S; and C₁₋₆alkylheterocyclic ring system having in the ring system 5 to 10 atoms with 1 to 4 of 19 20 such atoms being selected from the group consisting of N, O and S; 21 q is 0-3; R¹¹ is a member selected from the group consisting of H, C₁₋₈alkyl, C₂₋₈alkenyl, 22 C_{2-8} alkynyl, C_{3-8} cycloalkyl, C_{6-12} carbocyclic aryl, C_{1-6} alkylaryl, C_{1-6} alkyl- C_{3-8} cycloalkyl, -O- R^2 , 23 $-O-C(=O)R^2$, $-C_{1-8}alkyl-O-R^{10}$, $-C_{1-8}alkyl-O-C(=O)R^{10}$, $-C_{1-8}alkyl-C(=O)OR^{10}$, 24 $-C_{1-8}$ alkyl-O-C(=O)OR¹⁰, $-C_{1-8}$ alkyl-C(=O)NR¹⁰R¹⁰, $-C_{1-8}$ alkyl-NR¹⁰R¹⁰, 25 -C₁₋₈alkyl-NR¹⁰C(=O)R¹⁰, -SR¹⁰, where R² is as described above and R¹⁰ is a member selected 26 from the group consisting of H, C₁₋₈alkyl, C₂₋₈alkenyl, C₂₋₈alkynyl, and wherein when two R¹⁰ 27 groups are present they may be taken together to form a saturated or unsaturated ring with the 28 29 atom to which they are both attached; 30 p is an integer from 0-2; E is a member selected from the group consisting of a direct link, -O-, -N(-R¹¹)-, where 31 R¹¹ is as set forth above, phenylene, a bivalent 5 to 12 member heteroaryl group having 1 to 4 32 heteroatoms selected from the group consisting of N, O and S, and a five to ten membered 33 34 non-aromatic bivalent heterocyclic ring system having 1-4 heteroatoms selected from the group consisting of N, O and S, wherein said heteroaryl and said non-aromatic heterocyclic ring 35 structure may be independently substituted by from 0 to 5 R¹⁴ groups; 36 37 J is a member selected from the group consisting of a direct link, a bivalent 38 C₃₋₈cycloalkyl group, phenylene, a 5 to 12 member bivalent heteroaryl group having 1 to 4 39 heteroatoms selected from the group consisting of N, O and S, and a five to ten membered 40 non-aromatic bivalent heterocyclic ring system having 1-4 heteroatoms selected from the group consisting of N, O and S wherein said heteroaryl and said non-aromatic heterocyclic ring 41 structure may be independently substituted by from 0 to 5 R¹⁴ groups; 42

each R¹⁴ group is a member selected from the group consisting of H, C₁₋₈alkyl,

C₂₋₈alkenyl, C₂₋₈alkynyl, C₃₋₈cycloalkyl, halogen, polyhaloalkyl, C₀₋₈alkyl-C(=O)OH,

C₀₋₈alkyl-C(=O)O-C₁₋₈alkyl, -CN, -NO₂, C₁₋₈alkyl-OH, C₀₋₈alkyl-SH, -O-R² and -O-C(=O)R², an

unsubstituted amino group, a mono- or di-substituted amino group, wherein the substituted

amino groups are independently substituted by at least one member selected from the group

consisting of H, C₁₋₈alkyl, C₂₋₈alkenyl, C₂₋₈alkynyl, C₃₋₈cycloalkyl, polyhaloalkyl,

49 C_{0-8} alkyl-C(=O)OH and C_{0-8} alkyl-C(=O)O- C_{1-8} alkyl;

G is a member selected from the group consisting of: H; -CN; -OR¹⁷;

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t is an integer from 0 to 6,

u is the integer 0 or 1, and R¹⁷, R¹⁸, R¹⁹, R²⁰, R²¹, R²², R²³, R²⁴, R²⁵ and R²⁶ are independently selected from the group consisting of H, -OH, C₁₋₈alkyl, C₂₋₈alkenyl, C₂₋₈alkynyl, C₃₋₈cycloalkyl, C₆₋₁₂carbocyclic aryl, a five to ten membered heterocyclic ring system having 1-4 heteroatoms selected from the group consisting of N, O and S; and C₁₋₆alkylheterocyclic ring system having in the ring system 5 to 10 atoms with 1 to 4 of such atoms being selected from the group consisting of N, O and S; where R¹⁸ taken with R¹⁹, R²² taken with either of R²⁴ and R²⁵,

- and R²⁴ taken with R²⁵, can each independently form a 5 to 6 membered heterocyclic ring having
- from 1 to 4 atoms selected from the group consisting of N, O and S;
- with the proviso that when G is H, -CN, -OR¹⁷, either E or J must contain at least one N atom;
- or a pharmaceutically acceptable diastereomer, salt, hydrate, and solvate thereof.
- 6. (Original) A compound of claim 5, wherein R¹ and R⁸ are independently a lower alkyl group and R¹¹ is hydrogen or is a C₁ to C₈ alkyl group.
- 7. (Original) A compound of claim 5, wherein q is zero and R⁸ is lower alkyl group.
- 1 8. (Original) A compound of claim 5, wherein:
- 2 R⁸ is a methyl group;
- p is an integer from 1-2;
- E is selected from the group consisting of: a direct link,

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6 J is selected from the group consisting of:

8 and G is selected from the group consisting of:

9. (Previously amended) A compound of formula IV:

3 wherein:

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A is a member selected from the group consisting of: R^2 , $-NR^3R^4$, $-C(=O)NR^3R^4$,

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$$\begin{array}{c}
NR^6 \\
NR^6 \\
R^9
\end{array}$$
 and R^9

6 where R², R³, R⁴, R⁵, R⁶, R⁷, R⁸, and R⁹ are independently selected from the group consisting of

7 H, -OH, C_{1-8} alkyl, C_{2-8} alkenyl, C_{2-8} alkynyl, C_{3-8} cycloalkyl, C_{6-12} carbocyclic aryl, a five to ten

8 membered heterocyclic ring system having 1-4 heteroatoms selected from the group consisting

of N, O and S; and C₁₋₆alkylheterocyclic ring system having in the ring system 5 to 10 atoms

with 1 to 4 of such atoms being selected from the group consisting of N, O and S; where R⁶

taken with either of R⁷ and R⁸, and/or R⁷ taken with R⁸, can each form a 5 to 6 membered

12 heterocyclic ring having from 1 to 4 atoms selected from the group consisting of N, O and S;

Z is a member selected from the group consisting of a direct link, C₁₋₈alkyl,

14 C₃₋₈cycloalkyl, C₂₋₈alkenyl, C₂₋₈alkynyl, C₁₋₈carbocyclic aryl, or a five to ten membered

heterocyclic ring system having 1-4 heteroatoms selected from the group consisting of N, O and

16 S;

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17 n is 0-3;

D is a member selected from the group consisting of: -CH₂-, -O-, -N R², -C(=O)-, -S-,

19 -SO₂-, -SO₂-NR², -NR²-SO₂, -OC(=O)-, -C(=O)NR², and -NR²-C(=O)-;

20 R¹ and R¹⁴ are independently a member selected from the group consisting of H,

 $21 \quad C_{1-8}alkyl, \ C_{2-8}alkenyl, \ C_{2-8}alkynyl, \ C_{3-8}cycloalkyl, \ halogen, \ polyhaloalkyl, \ C_{0-8}alkyl-C (=O)OH,$

22 C_{0-8} alkyl-C(=O)O-C₁₋₈alkyl, -CN, -NO₂, C_{1-8} alkyl-OH, C_{0-8} alkyl-SH, -O-R² and -O-C(=O)R², an

23 unsubstituted amino group, a mono- or di-substituted amino group, wherein the substituted

24 amino groups are independently substituted by at least one member selected from the group

consisting of H, C₁₋₈alkyl, C₂₋₈alkenyl, C₂₋₈alkynyl, C₃₋₈cycloalkyl, polyhaloalkyl,

- C_{0-8} alkyl-C(=O)OH and C_{0-8} alkyl- $C(=O)O-C_{1-8}$ alkyl; 26
- q is 0-3; 27
- R¹¹ is a member selected from the group consisting of H, C₁₋₈alkyl, C₂₋₈alkenyl, 28
- C₂₋₈alkynyl, C₃₋₈cycloalkyl, C₆₋₁₂carbocyclic aryl, C₁₋₆alkylaryl, C₁₋₆alkyl-C₃₋₈cycloalkyl, -O-R², 29 $-O-C(=O)R^2, -C_{1-8}alkyl-O-R^{10}, -C_{1-8}alkyl-O-C(=O)R^{10}, -C_{1-8}alkyl-C(=O)OR^{10}, \\$ 30
 - $-C_{1-8}alkyl-O-C(=O)OR^{10}, -C_{1-8}alkyl-C(=O)NR^{10}R^{10}, -C_{1-8}alkyl-NR^{10}R^{10},$ 31
 - -C₁₋₈alkyl-NR¹⁰C(=O)R¹⁰, -SR¹⁰, where R² is as described above and R¹⁰ is a member selected 32
 - from the group consisting of H, C_{1-8} alkyl, C_{2-8} alkenyl, C_{2-8} alkynyl, and wherein when two R^{10} 33
 - groups are present they may be taken together to form a saturated or unsaturated ring with the 34
 - 35 atom to which they are both attached;
 - G is a member selected from the group consisting of: H; -CN; -OR¹⁷; 36

$$(CH_{2})$$
 (CH_{2}) (CH_{2})

$$NR^{23}$$
 $NR^{24}R^{25}$;
 $NR^{24}R^{25}$;

38 wherein

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- t is an integer from 0 to 6, 39
- u is the integer 0 or 1, and R^{17} , R^{18} , R^{19} , R^{20} , R^{21} , R^{22} , R^{23} , R^{24} , R^{25} and R^{26} are 40
- independently selected from the group consisting of H, -OH, C₁₋₈alkyl, C₂₋₈alkenyl, C₂₋₈alkynyl, 41
- C₃₋₈cycloalkyl, C₆₋₁₂carbocyclic aryl, a five to ten membered heterocyclic ring system having 1-4 42

from 1 to 4 atoms selected from the group consisting of N, O and S;

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heteroatoms selected from the group consisting of N, O and S; and C₁₋₆alkylheterocyclic ring 43 system having in the ring system 5 to 10 atoms with 1 to 4 of such atoms being selected from the group consisting of N, O and S; where R¹⁸ taken with R¹⁹, R²² taken with either of R²⁴ and R²⁵, and R²⁴ taken with R²⁵, can each independently form a 5 to 6 membered heterocyclic ring having 46

with the proviso that when G is H, -CN, -OR¹⁷, either E or J must contain at least one N atom;

or a pharmaceutically acceptable diastereomer, salt, hydrate, and solvate thereof.

(Currently amended) A compound of claim 9, wherein R^1 , R^8 , R^{11} and R^{14} 10. 1 2 are independently selected from the group consisting of hydrogen, methyl and ethyl;

A is selected from the group consisting of: -H, -CH₃, -NH₂, -C(O)N(CH₃)₂,

$$H_3C \xrightarrow{NH}$$
, $H_2N \xrightarrow{NH}$, $H_2N \xrightarrow{NH}$, $H_3N \xrightarrow{NH}$,

4 5

Z is selected from the group consisting of:

$$-N$$
, $-N$, and N ;

6 7

n is an integer from 0-2; and

8

D is selected from the group consisting of: -O-, -N(CH₃)-, and -CH₂-.

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11. (Previously amended) A compound of formula V:

1 R⁹-

3 wherein:

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R², R⁶, and R⁹ are independently selected from the group consisting of H, -OH, C₁₋₈alkyl,

5 C_{2-8} alkenyl, C_{2-8} alkynyl, C_{3-8} cycloalkyl, C_{6-12} carbocyclic aryl, a five to ten membered

6 heterocyclic ring system having 1-4 heteroatoms selected from the group consisting of N, O and

S; and C₁₋₆alkylheterocyclic ring system having in the ring system 5 to 10 atoms with 1 to 4 of

such atoms being selected from the group consisting of N, O and S;

9 R¹¹ is independently a member selected from the group consisting of H, C₁₋₈alkyl,

 $10 \quad C_{2\text{-8}} alkenyl, \, C_{2\text{-8}} alkynyl, \, C_{3\text{-8}} cycloalkyl, \, C_{6\text{-12}} carbocyclic \, aryl, \, C_{1\text{-6}} alkylaryl,$

11 C_{1-6} alkyl- C_{3-8} cycloalkyl, -O- R^2 , -O-C(=O) R^2 , - C_{1-8} alkyl-O- R^{10} , - C_{1-8} alkyl-O-C(=O) R^{10} ,

12 $-C_{1-8}$ alkyl- $C(=O)OR^{10}$, $-C_{1-8}$ alkyl- $O-C(=O)OR^{10}$, $-C_{1-8}$ alkyl- $C(=O)NR^{10}R^{10}$, $-C_{1-8}$ alkyl- $NR^{10}R^{10}$,

 13 $^{-C_{1-8}}$ alkyl-NR 10 C(=O)R 10 , $^{-S}$ R 10 , where R 2 is as described above and R 10 is a member selected

from the group consisting of H, C₁₋₈alkyl, C₂₋₈alkenyl, C₂₋₈alkynyl, and wherein when two R¹⁰

groups are present they may be taken together to form a saturated or unsaturated ring with the

atom to which they are both attached;

each R¹⁴ group is a member selected from the group consisting of H, C₁₋₈alkyl,

18 C₂₋₈alkenyl, C₂₋₈alkynyl, C₃₋₈cycloálkyl, halogen, polyhaloalkyl, C₀₋₈alkyl-C(=O)OH,

19 $C_{0.8}$ alkyl-C(=O)O-C₁₋₈alkyl, -CN, -NO₂, C₁₋₈alkyl-OH, C₀₋₈alkyl-SH, -O-R² and -O-C(=O)R², an

20 unsubstituted amino group, a mono- or di-substituted amino group, wherein the substituted

21 amino groups are independently substituted by at least one member selected from the group

consisting of H, C₁₋₈alkyl, C₂₋₈alkenyl, C₂₋₈alkynyl, C₃₋₈cycloalkyl, polyhaloalkyl,

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- 23 C_{0-8} alkyl-C(=O)OH and C_{0-8} alkyl- $C(=O)O-C_{1-8}$ alkyl;
- or a pharmaceutically acceptable diastereomer, salt, hydrate, and solvate thereof.

 \circ I^{-1}

12. (Original) A compound having the following structure:

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- 3 wherein:
- 4 A-Z is a member selected from the group consisting of:

$$HN$$
, H_3C , N

and N > N

5

6 E-J-G is a member selected from the group consisting of:

7 8

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2

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thereof.

CI NH_2 NH_2

and all pharmaceutically acceptable isomers, salts, hydrates, solvates and prodrug derivatives

- 13. (Previously amended) A pharmaceutical composition for preventing or treating a condition in a mammal characterized by undesired thrombosis comprising a pharmaceutically acceptable carrier and a therapeutically effective amount of a compound as in one of claims 5-12.
- 1 14. (Previously amended) A method for preventing or treating a condition in 2 a mammal characterized by undesired thrombosis comprising administering to said mammal a 3 therapeutically effective amount of a compound as in one of claims 5-12.
 - 15. (Original) The method of claim 14, wherein the condition is selected from the group consisting of:

 acute coronary syndrome, myocardial infarction, unstable angina, refractory angina,
- 4 occlusive coronary thrombus occurring post-thrombolytic therapy or post-coronary angioplasty,

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- 5 a thrombotically mediated cerebrovascular syndrome, embolic stroke, thrombotic stroke,
- 6 transient ischemic attacks, venous thrombosis, deep venous thrombosis, pulmonary embolus,
- 7 coagulopathy, disseminated intravascular coagulation, thrombotic thrombocytopenic purpura,
- 8 thromboangiitis obliterans, thrombotic disease associated with heparin-induced
- 9 thrombocytopenia, thrombotic complications associated with extracorporeal circulation,
- thrombotic complications associated with instrumentation such as cardiac or other intravascular
- catheterization, intra-aortic balloon pump, coronary stent or cardiac valve, and conditions
- 12 requiring the fitting of prosthetic devices.
- 1 16. (Previously amended) A method for inhibiting the coagulation of
- 2 biological samples comprising the administration of a compound as in one of claims 5-12.